



**RIPE NCC**

RIPE NETWORK COORDINATION CENTRE

# RIPE NCC Tools Update

Robert Kistelevki  
RIPE NCC

Robert Kistelevki | RIPE 88 MAT WG | 21 May 2024



**RIPE Atlas**

# RIPE Atlas - Current Activities



- Ongoing: renewing our big data backend
  - *In general, moving to more cost-effective solutions*
  - *Moving our historical data to a different subsystem (with minimal effects on users)*
  - *Revitalising the infrastructure serving our recent / frequently accessed data*
- Current status:
  - Historical data has been copied to an object store (S3), and most of it is already served from there when requested
  - Happening right now: moving “hot data” from on-prem HBase to a cloud-based one
  - The combination is aimed at a significant reduction of data centre costs
- This activity is expected to conclude around summer

# RIPE Atlas - Current Activities



- Ongoing: renewing our infrastructure components
  - *Working on containerising components of our distributed infrastructure*
- Current status:
  - Measurement metadata has been removed from on-prem Elasticsearch, is now stored / served from AWS OpenSearch (=> cost reduction)
  - First containerised / cloud-based “controllers” are alive and being tested
  - Containerisation of the other components is ongoing
  - Ultimate aim: reduce associated costs by using as much dynamic capacity as we can
- This activity is expected to conclude around the end of Q3

# RIPE Atlas - Current Activities



- Ongoing: User Interface (website/app) renewal
  - *Done: documentation site, coverage & statistics*
  - *Done: measurement creation, probe and measurement listing*
  - Just released: measurement pages, “my dashboard”, promotional pages
  - Coming up: probe status pages
  - Coming up: global maps and all other pages
- Please join our on-site RIPE Atlas demo
  - An excellent opportunity to immerse yourself in the UI with our developers
  - You can also provide general feedback

# RIPE Atlas - New Measurement Layout



Settings & Status | Latest Results | Map | Latencymon | Downloads Time Travel

The probes involved in this measurement, plotted geographically.

Filter by ASN, prefix, or country: just start typing

Dataset: RTT

Aggregator (?):

Probe	ASN (IPv4)	ASN (IPv6)	Time (UTC)	RTT
13907	60288		2024-05-10 11:10	13.849
22109	553		2024-05-10 11:10	11.798
22706	31148			No recent report available
29658	51207			No recent report available
34397	42003			No recent report available
50144	1136	1136	2024-05-10 11:10	20.132
50543	8881		2024-05-10 11:10	21.094
50926	12083		2024-05-10 11:10	107.683
51215	39083	39083	2024-05-10 11:10	21.936
51498	49472			No recent report available

Overview

Target

Ping Specific Settings: PACKETS: 3, SIZE: 48

Status & Timing: ONGOING from 2019-06-11T07:34:30Z every 240s

Probes: 10 Requested / 10 Actually Participating

Tags & Projects

Ownership & Costs: Public



### Measurement 21972436

PERIODIC PING measurement to nl-ams-as286.anchors.atlas.ripe.net via IPv4 initiated by YOU.

LATEST GO

OVERVIEW RESULTS

**OVERVIEW**

- Description: Ping measurement to nl-ams-as286.anchors.atlas.ripe.net
- Family and Type: IPv4 ping
- Target: nl-ams-as286.anchors.atlas.ripe.net
- Resolved on Probe?: No
- Periodic: Yes
- Public or Non-Public: Public

**STATUS & TIMING**

- Requested Start Time: 2019-06-11 09:34
- Current Status: Ongoing
- System Creation Time: 2019-06-11 09:34
- Interval: 240 seconds

Measurement Owner: robert@ripe.net

Editable: true

LatencyMON

**Measurement 21972436**

PERIODIC PING measurement to nl-ams-as286.anchors.atlas.ripe.net via IPv4 initiated by YOU.

LATEST GO

OVERVIEW RESULTS DETAILS MANAGE

**STOP MEASUREMENT** **REMOVE PROBES** **ADD PROBES**

Remove all abandoned

Select probes

ID	Created	Type	Value
35031632	4 years ago	area	WW

Records per page: 5 1-1 of 1

Search Results

Probe	ASN	Country	Time (UTC)	Min RTT
13907	60288	HU	2024-05-10 12:46:30	13.453 ms
22109	553	DE	2024-05-10 12:46:26	11.774 ms
22706	31148	RO	No report available	
29658	51207	FR	No report available	
34397	42003	HU	No report available	
50144	1136	HU	2024-05-10 12:46:32	19.925 ms
50543	8881	DE	2024-05-10 12:46:38	20.200 ms
50926	12083	US	2024-05-10 12:46:29	106.172 ms
51215	39083	DE	2024-05-10 12:46:37	21.086 ms

Result summary (latest, as of 2024-05-10 12:46 UTC):

- 6 probes reached their target.
- 4 probes did not.
- Min RTT: 11.774
- Mean RTT: 32.102

# RIPE Atlas - Current Activities



- Ongoing: probe firmware packaging
  - *Reworking the probe package to better match popular Linux distributions*
  - *Main goal is to simplify development, installation and upgrades (maintenance)*
  - *Looking forward to working with package maintainers*
- Current status:
  - Getting ready for a proper RPM release (RHEL 8 and 9)
  - Preparing for Debian and OpenWRT releases

# Summary of Earlier Proposals



- Probe farming:
  - Implement the discussed restrictions
- Measurement aggregators:
  - Implement hint of who the actual client is
  - Mandate proper attribution of RIPE Atlas
  - Incentivise aggregators to step up as sponsors
  - Additional requirements may be applied later to ensure sustainability
- Data retention principles:
  - Continue implementation along the proposed principles
  - See Felipe's article about some current cost reduction activities



# Summary of Earlier Proposals



- Remove per-hop “late” packets from traceroute:
  - plan implementation
- Measure well-known CDNs:
  - Do not implement as proposed
  - Smaller-scale experiment instead
- Generic HTTP measurements:
  - do not implement as proposed
- Add support for STARTTLS measurements:
  - plan implementation
- Remove support for non-public measurements:
  - no changes now



**RIS**

# Routing Information System (RIS)



- Current activities:
  - Updating the Remote Route Collectors (RRCs) to a new operating system
  - Creating metrics for the behaviour of RIS peers
  - Monitoring for outlier behaviour of peers (“noisy/unstable peers”)
  - Improving how we build BGP views from the BGP updates
    - e.g. dealing with stuck routes
- Coming up:
  - Review RIPEstat and RIS data storage solution after RIPE Atlas migration is complete



**RIPEstat**

# RIPEstat



- Availability of data recency information:
  - A backend tracking service is now in place to monitor RIPEstat backends
  - Added a data recency metadata service to expose the freshness of the data:
    - Currently supported data calls: Announced Prefixes, ASN Neighbours, RIS Prefixes
    - Example call: <https://stat.ripe.net/data/asn-neighbours/meta>
  - Added a dashboard to analyse historical data for internal insight
  - Working on new data calls to integrate into the service
- Planning to initiate a review of product strategy after RIPE 88



# Questions



robert@ripe.net  
@kistel